

### Claims

1. A helical screw rotor compressor (K) which is adapted to work against a pressure container (T) whose pressure (P) is allowed to vary between a lowest pressure P2 and a highest pressure P1, said compressor (K) being driven by an electric motor (M), wherein  
5 in an operating range defined by the pressure interval P of the pressure container (T) the motor has a characteristic such that halving of the torque of said motor will result in an increase of at least six percent in the speed of said motor.
2. A compressor (K) according to claim 1, characterized in that the electric motor (M) has a characteristic such that halving of the torque of said motor will result in an  
10 increase in the speed of said motor by at most 100 percent.
3. A compressor (K) according to claim 1, characterized in that the electric motor (M) is a commutator motor.
4. A compressor (K) according to claim 1, characterized in that the compressor (K) is optimised for an internal volume factor at which the pressure of the compressor (K) is  
15 lower than  $P2 + 0.85 * (P1 - P2)$  at the opening instance.
5. A compressor (K) according to claim 4, characterized in that the compressor (K) is optimised for an internal volume factor at which the pressure of the compressor (K) is equal to the lowest working pressure P2 in the pressure container at the opening instance.
- 20 6. A compressor (K) according to claim 4, characterized in that the compressor (K) is optimised for an internal volume factor at which the pressure of the compressor (K) is lower than the lowest working pressure P2 in the pressure container at the opening instance.